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Notice of Allowability	Application No.	Applicant(s)	
	10/028,146	TURBA, THOMAS N.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 8/20/2007.
2. ☒ The allowed claim(s) is/are 1-25.
3. ☐ The drawings filed on _ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>10/25/2007</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. The Action is responsive to Applicant's Amendment filed August 20, 2007.
2. After a thorough search and examination of the present application, and in light of the following:

prior art made of record;

an Examiner's Amendments made October 25, 2007 that was authorized to amend claims 1-6, 11, 16 and 21; and

an update search on prior art conducted in domains (EAST, NPL-ACM, Google, NPL-IEEE, etc);

Claims 1-25 are allowed.

Examiner's Amendments

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this Examiner's Amendments, listed below was given on October 25, 2007 in a telephone interview with Mr. John Rooney, Registration Number 28,898.

3.1. Please amend claims 1-6, 11, 16 and 21 follows:

1. (Currently Amended) In a data processing system having a user terminal which generates a service request to define desired data processing services coupled to a data base management system which provides said desired data processing services by execution of an ordered sequence of native command language script via a publicly

accessible digital data communication network, the improvement comprising:

a. a customized user interface having a plurality of components wherein at least one of said plurality of components is stored within said user terminal and at least another one of said plurality of components is stored within and transferred via said publicly accessible digital data communication network from said data base management system to said user terminal,

wherein a plurality of services are predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and

wherein the services are categorized by the language in which they were developed;

b. a document containing a plurality of elements formatted in XML (extensible markup language) generated by said user terminal utilizing said customized user interface and transferred from said user terminal to said data base management system which contains said service request; and

c. an XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script,

wherein the transformation is further defined by mapping controls, element properties and mapping actions.

2. (Currently Amended) The ~~improvement~~ system according to claim 1 wherein at least one of said plurality of elements further comprises an attribute which is recorded within said XML mapping tree.

3. (Currently Amended) The ~~improvement~~ system according to claim 2 wherein said document is defined by a Document Type Definition (DTD).

4. (Currently Amended) The ~~improvement~~ system according to claim 3 further comprising a storage space within said data base management system in which said XML mapping tree is stored for future use.

5. (Currently Amended) The ~~improvement~~ system according to claim 4 wherein said XML mapping tree is transferred to said user terminal to be displayed on said user terminal in a window.

6. (Currently Amended) An apparatus comprising:

a. a user terminal having a customized user interface wherein a portion of said customized user interface is not resident within said user terminal;

b. an XML document containing a plurality of elements which describes a service request defining a database management process generated by said user terminal utilizing said customized user interface;

c. a publicly accessible digital data communication network;

d. a data base management system having an input format different from XML which involves a native script which is executed by said data base management system to honor said service request responsively coupled to said publicly accessible digital data communication network which transfers said portion of said customized user interface not resident within said user terminal to said user terminal and which receives said XML document via said publicly accessible digital data communication network,

wherein a plurality of services are predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and

wherein the services are categorized by the language in which they were developed; and

e. an XML mapping tree responsively coupled to said data base management system which parses said XML document into said input format of said data base management system which involves said native script which is executed by said data base management system to honor said service request,

wherein a transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script, and

wherein the transformation is further defined by mapping controls, element properties and mapping actions.

11. (Currently Amended) A method of using an XML document to define a service request to a data base management system having an incompatible input protocol

including an ordered sequence of command language statements for execution by said data base management system to honor said service request comprising:

a. transferring a portion of a customized user interface to a user terminal from said data base management system;

b. creating said XML document containing a plurality of elements by said user terminal using said customized user interface;

c. transferring said XML document defining said service request to said data base management system via a publicly accessible digital data communication network,

wherein a plurality of services are predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and

wherein the services are categorized by the language in which they were developed;

d. parsing said XML document into an XML mapping tree,

wherein a transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script, and

wherein the transformation is further defined by mapping controls, element properties and mapping actions; and

e. presenting said parsed XML document as said ordered sequence of command language statements to said data base management system for processing by execution.

16. (Currently Amended) An apparatus comprising:

a. creating means for creating an XML document containing a plurality of elements defining a service request utilizing a customized user interface;

b. transmitting means responsively coupled to said creating means for transmitting said XML document defining said service request,

wherein a plurality of services are predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and

wherein the services are categorized by the language in which they were developed;

c. providing means responsively coupled to said transmitting means for providing data base management functions to honor said service request and for providing a portion of said customized user interface to said creating means; and

d. composing means responsively coupled to said providing means for composing said XML document from an XML mapping tree and data in said data base management system,

wherein a transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script, and

wherein the transformation is further defined by mapping controls, element properties and mapping actions.

21. (Currently Amended) An apparatus for controlling a legacy database management system using an XML message comprising:

a. a user terminal having a customized user interface with which said user terminal generates a database management system service request as said XML message containing a plurality of element,

wherein a plurality of services are predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and

wherein the services are categorized by the language in which they were developed;

b. said legacy database management system responsively coupled to said user terminal via a publicly accessible digital data communication network which stores components of said customized user interface and which transfers said components of said customized user interface to said user terminal for generating said service request as said XML message and which honors said service request by executing an ordered sequence of command language script; and

c. a conversion facility responsively coupled to said legacy database management system which parses said XML message to produce said ordered sequence of command language script,

wherein a transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script, and

wherein the transformation is further defined by mapping controls, element properties and mapping actions.

Reason for Allowable

7. The following is the Examiner's statement of reasons for allowance:

In the Examiner's Office Action, dated May 17, 2007, the non-Final Rejection under 35 U.S.C. § 103 rejections was made mainly based on the reference of Rogers et al.: "WWW CLIENT SERVER DYNAMIC INTERACTIVE SYSTEM METHOD", U.S. Patent 6,604,135, issued August 5, 2003, hereafter "Rogers"; and further in view of Golden: "METHOD, COMPUTER SYSTEM AND COMPUTER PROGRAM PRODUCT FOR PROCESSING EXTENSIBLE MARKUP LANGUAGE STREAMS", U.S. Patent Application 2002/0073399, published June 13, 2002; and Warshavsky et al.: "METHOD AND APPARATUS FOR MAPPING BETWEEN XML AND RELATIONAL REPRESENTATIONS", U.S. Patent 6,732,095, issued May 4, 2004, hereafter "Warshavsky".

In a response to the Office Action of August 20, 2007, in addition to questioning whether a *prima facie* case of obviousness has been established for combining the three references, Applicant argued that the combined teaching of Rogers, Golden and Warshavsky fails to meet the claimed limitations because none of the references individually or in combination discloses a service request embedded in an XML document, which must be converted into the native command language script of a legacy data base management system for honoring. With regard to claim 1, for

example. Claim element b requires, "a document containing a plurality of elements formatted in XML (extensible markup language) generated by said user terminal utilizing said customized user interface and transferred from said user terminal to said data base management system which contains said service request". The claimed "service request" is first described in the preamble. That means the claimed "user terminal" uses the claimed "generates the claimed "XML document" which contains the claimed "service request". Applicant further argued that Warshavsky further fails to teach the element of XML mapping tree stored within said data base management system via which the transformation of each of said plurality of elements is defined which permits conversion of said document to said ordered sequence of native command language script", which is limiting of the third claimed element. Similar arguments were made with respect to other independent claims.

Based on the argument, the subject matter as described and an Examiner's Amendments which further qualifies services as predefined operations or related sequences of operations which provide the client with a desired static or dynamic result, and the services are categorized by the language in which they were developed; and further limits an XML mapping tree in which a transformation of each of XML elements is defined which permits converting document to an ordered sequence of native command language script and the transformation is defined by a combination of mapping controls, element properties and mapping actions.

After a further review of the prior art cited or considered, Examiner is persuaded that,

by having subject matter as amended included in each of the independent claims 1, 6, 11, 16 and 21, the instant Application clearly distinguishes from prior art.

An update search on prior art in domains (EAST, NPL-ACM, Google, NPL-IEEE, etc) has been conducted. The prior art searched and investigated in the domains (EAST, NPL-ACM, Google, NPL-IEEE, etc) do not fairly teach or suggest teaching of the subject matter as described by the combined limitation in each of the independent claims 1, 6, 11, 16 and 21.

Claims (2-5), (7-10), (12-15), (17-20) and (22-25) are directly or indirectly dependent upon the independent claims 1, 6, 11, 16 and 21, and are also distinct from the prior arts for the same reason.

After a search and a thorough examination of the present Application and in light of the prior arts, Claims 1-25 are allowed.

Conclusions

4. Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Contact Information

5. Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Kuen S. Lu whose telephone number is (571)-272-4114.

The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571)-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-27-9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, please call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kuen S. Lu, 
Patent Examiner, Art Unit 2167,

October 17, 2007